

**AMENDMENTS TO THE SPECIFICATION:**

Page 1, please add the following new paragraphs before paragraph [0001]:

- [0000.2]      CROSS-REFERENCE TO RELATED APPLICATIONS
- [0000.4]      This application is a 35 USC 371 application of PCT/DE 2004/000412 filed on March 4, 2004.
- [0000.6]      BACKGROUND OF THE INVENTION

Please replace paragraph [0001] with the following amended paragraph:

- [0001] ~~Technical~~      **Field of the Invention**

Please add the following new paragraph after paragraph [0001]:

- [0001.2] This invention relates to an improved fuel injector system for use with internal combustion engines.

Please add the following new paragraph after paragraph [0001.2]:

- [0001.4]      Description of the Prior Art

Please replace paragraph [0002] with the following amended paragraph:

- [0002] Stroke-controlled injection systems with a high-pressure accumulator are **known and** used to deliver fuel in direct-injecting internal combustion engines. The advantage of these injection systems lies in the fact that the injection pressure can be adapted to wide ranges of load and engine speed. A high injection pressure is required in order to reduce emissions and to achieve a high specific output. Since the achievable pressure level in high-pressure fuel pumps is limited for strength reasons, pressure boosters are used in the fuel injectors in order to further increase pressure in fuel injection systems.

Please delete paragraph [0003].

Page 3, please replace paragraph [0007] with the following amended paragraph:

[0007] ~~Depiction of the Invention~~ **SUMMARY OF THE INVENTION**

Page 4, please replace paragraph [0010] with the following amended paragraph:

[0010] ~~Drawings~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

Please replace paragraph [0011] with the following amended paragraph:

[0011] The present invention will be described in detail below, in conjunction with the drawings, in which: [.]

Please replace paragraph [0012] with the following amended paragraph:

[0012] Fig. 1 shows an embodiment variant of a servo-valve with a leakproof servo-valve piston, which is associated with a fuel injector equipped with a pressure booster and

Please replace paragraph [0013] with the following amended paragraph:

[0013] Fig. 2 shows another structural embodiment variant of a servo-valve with a sealing seat embodied in the form of a conical seat and a one-piece valve housing.

Please replace paragraph [0014] with the following amended paragraph:

[0014] ~~Embodiment Variants~~

### **DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Page 7, please replace paragraph [0020] with the following amended paragraph:

[0020] Fig. 2 shows an embodiment variant of the first sealing seat of the servo-valve, which, ~~in this embodiment variant~~, is embodied in the form of a conical sealing seat, while the other sealing seat of the servo-valve piston is embodied in the form of a slider seal.

Page 10, please replace paragraph [0027] with the following amended paragraph:

[0027] In order to activate the pressure booster 3, the differential pressure chamber 6 (return chamber) of the pressure booster 3 is pressure-relieved[.] This triggers by triggering the on/off valve 32 to open so that the control chamber 36 of the servo-valve 22 is pressure-relieved into the second return 31. Because of this, the servo-valve piston 23 moves, impelled by the force of pressure prevailing in the second hydraulic chamber 38, which force engages the annular surface 34 and pushes the conical surface 33 upward toward the sealing edge 29 of the first valve body part 27, thus closing the second sealing seat 25 while this upward movement of the servo-valve piston 23 opens the first sealing seat 24. The degree to which the first sealing seat 24 opens is designed to be of such a magnitude that even when the first sealing seat 24 is open, a residual pressure is maintained in the second hydraulic chamber 38. This assures that the servo-valve piston 23 of the servo-valve 22 remains in its open position and the second sealing seat 25 remains continuously closed.

Page 11, please replace paragraph [0028] with the following amended paragraph:

[0028] When the first sealing seat 24 is open, the differential pressure chamber 6 (return chamber) of the pressure booster 3 is de-coupled from the high pressure exerted by the high-pressure accumulator 1 and is pressure-relieved into the first return 30 via the shut-off discharge line 21 and the discharge outlet control chamber 35. Because of this, the pressure in the compression chamber 9 of the pressure booster 3 increases in accordance with the boosting ratio of the pressure booster 3. This boosted pressure travels into the nozzle chamber 16 via the nozzle chamber inlet 17. The boosted pressure prevailing in the nozzle chamber 16 acts on the pressure shoulder of the injection valve member 14 and opens the valve member, thus unblocking the injection openings, which lead into the combustion

chamber of the internal combustion engine, and initiating the injection phase. When the injection valve member 14 is completely open, the second throttle restriction 15 is closed so that no loss flow occurs during the injection phase.

Please replace paragraph [0029] with the following amended paragraph:

[0029] To terminate the injection phase, the on/off valve 32 of the servo-valve 22 is closed, which causes the system pressure to build up in the control chamber 36 of the servo-valve 22. The system pressure 36 acts on the end surface 39 of the servo-valve **piston** 23 and moves the servo-valve piston 23 downward into its starting position, thus opening the second sealing seat 25 and once more closing the first sealing seat 24 that leads to the outlet control chamber 35 and the first return 30.

Page 12, please add the following new paragraph after paragraph [0032]:

[0033] The foregoing relates to a preferred exemplary embodiment of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.

Please delete pages 13 and 14.